# **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: /0/621,911A
Source: | IFWO
Date Processed by STIC: | 11/19/04

# ENTERED



**IFWO** 

RAW SEQUENCE LISTING

DATE: 11/19/2004

PATENT APPLICATION: US/10/621,911A

TIME: 10:45:21

Input Set : A:\PTO.FG.txt

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3 <110> APPLICANT: SAITOU, Mitinori
         SURANI, Azim
 6 <120> TITLE OF INVENTION: Genes
 8 <130> FILE REFERENCE: 674558-2002
10 <140> CURRENT APPLICATION NUMBER: 10/621,911A
11 <141> CURRENT FILING DATE: 2003-07-17
13 <150> PRIOR APPLICATION NUMBER: PCT/GB02/00215
14 <151> PRIOR FILING DATE: 2002-01-18
16 <150> PRIOR APPLICATION NUMBER: GB 0101300.2
17 <151> PRIOR FILING DATE: 2001-01-18
19 <160> NUMBER OF SEQ ID NOS: 26
21 <170> SOFTWARE: SeqWin99, version 1.02
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 617
25 <212> TYPE: DNA
26 <213> ORGANISM: Mus musculus
28 <400> SEQUENCE: 1
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30 teegeaceat gaaceacact teteaageet teateacege tgecagtgga ggacageece 120
31 caaactacga aagaatcaag gaagaatatg aggtggctga gatgggggca ccgcacggat 180
32 eggettetgt cagaactaet gtgateaaca tgeecagaga ggtgteggtg eetgaeeatg 240
33 tggtctggtc cctgttcaat acactettca tgaacttctg ctgcctgggc ttcatagect 300
34 atgectaete egtgaagtet agggategga agatggtggg tgatgtgaet ggageceagg 360
35 cctacgeete cactgetaag tgeetgaaca teageacett ggteeteage atcetgatgg 420
36 ttgttatcac cattgttagt gtcatcatca ttgttcttaa cgctcaaaac cttcacactt 480
37 aatagaggat teegaettee ggteetgaag tgetteacee teegeagetg egteeeteet 540
38 tgcccctccc tacacgcagg tgtaacactc atttatctat ccacagtgga ttcaataaag 600
39 tgcacttgat aaccacc 617
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 137
43 <212> TYPE: PRT
44 <213> ORGANISM: Mus musculus
46 <400> SEOUENCE: 2
47 Met Asn His Thr Ser Gln Ala Phe Ile Thr Ala Ala Ser Gly Gln
48 1
50 Pro Pro Asn Tyr Glu Arg Ile Lys Glu Glu Tyr Glu Val Ala Glu Met
51
53 Gly Ala Pro His Gly Ser Ala Ser Val Arg Thr Thr Val Ile Asn Met
56 Pro Arg Glu Val Ser Val Pro Asp His Val Val Trp Ser Leu Phe Asn
59 Thr Leu Phe Met Asn Phe Cys Cys Leu Gly Phe Ile Ala Tyr Ala Tyr
```

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Output Set: N:\CRF4\11192004\J621911A.raw

62 Ser Val Lys Ser Arg Asp Arg Lys Met Val Gly Asp Val Thr Gly Ala 65 Gln Ala Tyr Ala Ser Thr Ala Lys Cys Leu Asn Ile Ser Thr Leu Val 66 105 68 Leu Ser Ile Leu Met Val Val Ile Thr Ile Val Ser Val Ile Ile Ile 120 71 Val Leu Asn Ala Gln Asn Leu His Thr 72 130 74 <210> SEQ ID NO: 3 75 <211> LENGTH: 823 76 <212> TYPE: DNA 77 <213> ORGANISM: Mus musculus 79 <400> SEQUENCE: 3 80 ggatcacaga ctgactgcta attgggtctt ggttttaggt cttttcaaag actaagcaat 60 81 cttqttccga gctagctttt qaqqcttctq cccatcqcat cqccatqqaq qaaccatcaq 120 82 agaaagtcga cccaatgaag gaccctgaaa ctcctcagaa gaaagatgaa gaggacgctt 180 83 tggatgatac agacgtecta caaccagaaa cactagtaaa ggteatgaaa aagetaacce 240 84 taaaccccgg tgtcaagcgg tccgcacgcc ggcgcagtct acggaaccgc attgcagccg 300 85 tacctgtgga gaacaagagt gaaaaaatcc ggagggaagt tcaaagcgcc tttcccaaga 360 86 gaagggtccg cactttgttg tcggtgctga aagaccctat agcaaagatg agaagacttg 420 87 ttcggattga gcagagacaa aaaaggctcg aaggaaatga gtttgaacgg gacagtgagc 480 88 cattcagatg tetetgeact ttetgecatt atcaaagatg ggateeetet gagaatgega 540 89 aaategggaa gaattaggag ettacattgt aegetgeeet ggetgtegae gatgeegeae 600 90 agcagatgtg aaagctattt tttgtttaag attaaacttt ttctggtgct gggaaatctt 660 91 aacttgttaa cctttaaatt gtagatagga tgcacaacga tccagattta tgtgaagttt 720 92 agaagcctca agctgtgagg cccagggctg aggaataaag taaatagaat ttggagtatg 780 93 tacgttctaa tttccagaaa tttgtaataa aagcattttt gtt 823 95 <210> SEQ ID NO: 4 96 <211> LENGTH: 150 97 <212> TYPE: PRT 98 <213> ORGANISM: Mus musculus 100 <400> SEQUENCE: 4 101 Met Glu Glu Pro Ser Glu Lys Val Asp Pro Met Lys Asp Pro Glu Thr 102 1 104 Pro Gln Lys Lys Asp Glu Glu Asp Ala Leu Asp Asp Thr Asp Val Leu 105 107 Gln Pro Glu Thr Leu Val Lys Val Met Lys Lys Leu Thr Leu Asn Pro 108 110 Gly Val Lys Arg Ser Ala Arg Arg Arg Ser Leu Arg Asn Arg Ile Ala 113 Ala Val Pro Val Glu Asn Lys Ser Glu Lys Ile Arg Arg Glu Val Gln 116 Ser Ala Phe Pro Lys Arg Arg Val Arg Thr Leu Leu Ser Val Leu Lys 117 119 Asp Pro Ile Ala Lys Met Arg Arg Leu Val Arg Ile Glu Gln Arg Gln 120 100 105 122 Lys Arg Leu Glu Gly Asn Glu Phe Glu Arg Asp Ser Glu Pro Phe Arg · 120 125 Cys Leu Cys Thr Phe Cys His Tyr Gln Arg Trp Asp Pro Ser Glu Asn

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DATE: 11/19/2004 PATENT APPLICATION: US/10/621,911A TIME: 10:45:21

Input Set : A:\PTO.FG.txt

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        130
                            135
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129 145
131 <210> SEQ ID NO: 5
132 <211> LENGTH: 4925
133 <212> TYPE: DNA
134 <213> ORGANISM: Rattus sp
136 <400> SEOUENCE: 5
137 ecceçecce eccecece ectececee ecceaecte egacetatga tegetectae 60
138 acgcaacacg aagcggactc cccgcatcat tcacgtagac ccgccttctg ctttccctgt 120
139 egggqttttg ggaageeegg eggeetete tteteaeett geteeaetag eaegeggetg 180
140 ttttcactga gcccagcact ggctaagtgg agcaccagga gtttcaggct atccttcaga 240
141 gggcaaggtg tagtccatgg tgggctacag gagaccetet eteteegtga gtacagagag 300
142 gcaaacccaa gccagacagg ggtgatgatt aggaacatac cttcgtcggg gagaaaatac 360
143 cggttcatat aggaataaga ggaaccagga ggtagttaag gctgtggtgt ctggttgcgg 420
144 ggtttttgac tctcaacaac cacgttcaga acgtgctgag tttttatgat ggtgtagaat 480
145 ttccttatca gcaattggtc tccgcggtgt ttctttttct tttttaattt tttaagtata 540
146 atttggtgtt tgaagcaact gtacttggac tagaactccc tgtgtaatcc agaatggaat 600
147 cccaaatcct aggattaaag gttttagtgg gctgcagtgt tgggtggggg ttgttttgat 660
148 tacgttgtag cccaggctgg gctcaatctc aatcctcctg cctctgcctt ctaaacgcta 720
149 ggattaaaag tgctgcgcca tgatcctgct gtagctttat ttttatttat ttatttattt 780
150 attttggctc tttttttttg gagctgggga ccgaaccgag ggccttgtgc ttcctaggca 840
151 agegetetae caetgageta aateeceaac eecagtgtag etttattttt aagaacagga 900
152 gtettgttte teaaaacagt ttetetgtag eeetggttgt eetggaacte egtaaaccag 960
153 getggtttgg gaetetgeet ttaaaacaet gggaetaaag geggtaecae eteegtggge 1020
154 tacaccggaa tettttaage tteatttgaa eeggggettt ttettttet eacecaettt 1080
155 ctggaagcga ttttcctgct aaatttccat tcctggtaaa tgactctgag gggaaatagg 1140
156 aacccagaat agattgagec gggggetace tgggaceceg cacteeccae eccecageeg 1200
157 ctgttgaage tetttgeetg aggggeetee gggtttgata ceteetagea eteegggetg 1260
158 agggegtgge tegggaggag ceatteettt ggagaggaaa acaactgetg geettgaate 1320
159 tgccctaata cctgacagtt acatgggacc tccttatttc cacaggattc tttagtcttt 1380
160 gtttgggaga ttttcaaatc ttgagactgc tcaacccttc ctggcctaac actcacaagg 1440
161 ccaggetaga eccaaattet gteaaceeet tetgtgteea aaaeggtggg tggetagetg 1500
162 geteaceett ggtgteactt tgetttaaca tteggaaaag ttgtggtaag ttteetgtat 1560
163 aaaataggac catctactgg gtgtggtccc atgtaaagca aggttggttt cccaaaatac 1620
164 cetgtttaca tagatgteeg gaageattgg ageaggteaa ttagatttag gtggaaacag 1680
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166 eteeggetaa geaacacaat tggetgeagg ggtetetgga agaggtgtga gacaagagag 1800
167 aatatgcagg tttcaggacc tctgaactag agttaggctg ctgtaacatt gtaacattgc 1860
168 tgtaagcaga acagcccatg gtaagaagct cagtggatct ctacaaacac taggatatct 1920
169 geteagggtt tatgaceagg ecetgtgeat atggtttget tettgttgge ecetetettg 1980
170 aagaggggtg attatetgtt acceaettee ttgtttetet ggggtattae ettgcaaaat 2040
171 geaaaatgat atactteact aatgteteea tettetgttt eagaaateet acaaccagaa 2100
172 acactagtaa aggtcatgaa aaagctaacc ctgaacccca gtgccaagcc gacaaaatat 2160
173 categtegte aaagggtteg tetecaggtt aagageeage etgtggagaa cagaagtgaa 2220
174 agaatcatga gggaagttca aagcgeettt eecaggagaa gggteegeae tetgttgtee 2280
175 gtgctgaaag accccatagc aaggatgaga agatttgttc gggtgagttg cgtttgtggg 2340
176 cggggcatag atctaagagc aactctagcc tcaggaatgg cacctaggtt aaacagggaa 2400
177 tgtagacaag gatagtgact acctgtgatt cccagctcaa gaaaacaagc tccaaggcta 2460
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#### RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/621,911A

DATE: 11/19/2004 TIME: 10:45:21

Input Set : A:\PTO.FG.txt

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178 teetetaetg egeagtetga agetggeeag agetatatge aaattgataa gteagtataa 2520
179 cattlatttt tggattttca gactccctcc ccatagtcca aactggccct ccagttcagt 2580
180 ccacggtcct gettetteec eggtgetagg ettttgagtg ataaggetga ettagaetgg 2640
181 atotoagago tgaagtggao otgttagtot ttgtagacca ggotggggtg gtttotgott 2700
182 teteagegee tageteacat agtaggeatt ttaactttgt ettaatagta atttgagtaa 2760
183 ttttgttttt ctcttgaaga ttgagcagag acaaagacag cttgaaggaa atgaggtaaa 2820
184 tgcatatgga tgggtagggt gtctatqqat qqqtaqqqtq tcttqttttt actqtttcct 2880
185 tagacaagga gtgtgtatgt ggagagttac cttctcaaca cagggaatct ggttattaaa 2940
186 gcagtacttt aaaaataaat aaaataaata aaataaaaat aaagcagtag aaggggattt 3000
187 acatttettt tgagttgeaa tateetgatt aacattttte ttteagagae gagatgagee 3060
188 attcagatgt ctctgcactt tctgccatta tcaqaqatqq qatccttctq aqaatqctaa 3120
189 aatcgggcag aaccagaaga attagggcag tttgaattgt acaccgtcct tgccqttaac 3180
190 ggtgccatgc agcagatgtg aaagctgttt ttttgtttaa gattaaactt ttcttggtgc 3240
191 tggggaaatc tcttctaatt gctaaccttt aaattatata ggatgtgtga catttggatt 3300
192 catgggaatg acagatttac ccaagaattg agcatgagtc aaagcctggt agtttgattt 3360
193 agaaggtaat tggaataaat ctttttattt tagattttct agtttgcaga gaaatttgta 3420
194 wataaaggcaa atttgttatcootttaataaat acagaacaga attagaatgag ocattggaga 3480
195 tgggggactc gttttttaca ggtgcatgtg tgggtgtgtg atgttcagag ttcaatgtgt 3540
196 getaceetgt atttetgett gaggeaaggt etecatgagg cetagetggt etaacteetg 3600
197 gtcctgcctt ttgttttccc ctgagttttg acaccatagg cttgtcggca agatctggaa 3660
198 gaggettgat gtttgtgttt gtgetgtgta ataaacaatt ggttgacata tteetaaagt 3720
199 gtggcactgt attgacctgt ctgtctcatg aggaagttaa tgaccggagc ataattgtat 3780
200 getttattte etgagagaag tgteaggaaa ggaggagtta ggaagaaage eecaggetgg 3840
201 ggttaagage actggetget tttecagagg teetgagtte aatteecage aateacetgg 3900
202 tggctcccga acatctgtaa caggatccaa tgccctcttt tggtgtgtct aagaactccc 3960
204 teagagetgg ggaacegaac ceagggeett gegettgeta ageaageget etaceactga 4080
205 getaaateee caaceeetae aatggeettt ttetacetge ttttgaatta teaataaaag 4140
206 actggggcaa aagaaaggct ggagtgaatg agagagaaca tgtgaagagt aaatgagaga 4200
207 gagcatgagg gaatgaatga gagagtgaat gtgagaacga atgtgagagc qagtgagaga 4260
208 acatgagaag aacacgttaa gagtgagtga agagagaatg tgaggtgtgt atgaagattg 4320
209 tgtgtggggt tggggattta geteagtggt agagtgettg cetaggaage acaaggeeet 4380
210 gggttcggtc cccagctcca aaaaaaaqac ccaaaaaaaa aaaaaaaaa aaaqattqtq 4440
211 tgtgtgtgtg aaaggagagt gcatgtggtg tgtgtgagat atgtgcaagg tgtgtatcaa 4500
212 gagtgtgtgt gagagtgaaa gggtaatgaa cagaggtgtg catgagcgtg ggagtttgag 4560
213 aaaagaaaac agcaataaaa aaaaaagcag agtgcacgag agaatgcaga qtgtgtgcaa 4620
214 cctcaagctg agacagagac agagagaaaq agagagaga agagagactt taagccttga 4680
215 aattacctgt cagtttgtac ccaaatagta gtctgtgtat atttattttg agccttccag 4740
216 atccctgctt ccagtggaga actctgattc tatgttgagg ctggaccctq gcaatagtgg 4800
217 gettettgaa aaatagteaa aggaaacagt getacaccat ggaettaage etttagaete 4860
218 agttetgget teaagageag etgteagaaa ataagtgatg aactaettge agtegaacte 4920
219 gaatc 4925
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222 <211> LENGTH: 1444
223 <212> TYPE: DNA
224 <213> ORGANISM: Rattus sp
226 <400> SEQUENCE: 6
227 ccaggattça gacgagctag gcctcatgca tggagacctt gcctcaaqca qaaataaaca 60
228 gggtagcaca cattgaacte tgaacateac gagtgtgcac acacceacac atqeatetqt 120
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DATE: 11/19/2004

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/621,911A TIME: 10:45:21

Input Set : A:\PTO.FG.txt

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229 aaaaaacgag tececatete caatggeteg tietaatetg tietgtgtat tiattaaaga 180
230 taacaaattt gcctctatta caaatttctc tgcaaactag aaaatctaaa ataaaagatc 240
231 tattccaatt accttctaaa tcaaactacc gggctttgac tcatgctcaa ttcttgggta 300
232 aatctgtcat tcccatgaat ccaaatgtca cacatcctat ataatttaaa ggttagcaag 360
233 tagagatttc cccagcacca agaaaagttt aatcttaaac aaaaaaacag ctttcacatc 420
234 tgctgcatgg caccgttaac ggcaaggaca gtgtatgatt caaactgccc taattcttct 480
235 ggttctgccc aattttagca ttctcagaag gatcccatct ctgataatgg cagaaagtac 540
236 agagacatet gaatggetea actettetet cattteette aagetgtett tgtetetget 600
237 caatccgaac aaatcttctc atccttgcta tggggtcttt cagcaccgac aacagtgtgc 660
238 ggaccettet ettgggaaag gegetttgaa eteceeteat gattetttea ettetgttet 720
239 ccacaggetg getettaate tggagaegaa eeetttgaeg aagatgatat tttggeegat 780
240 tgagatagaa tatcaaaaca acatttaaca tttaaataac ttaacgatat acacaccttt 840
241 ttttttcca cctccccaca cagacaaaaa acaaccctat tttttcttta caaccccgcc 900
242 taagcaageg aagcattagt aactgaccaa teatagaaag gaaacaccae cagaccacat 960
244 atatactece eccececege accateacta cateacecte tecacecatt eccacetece 1080
245 cccccaacat taaccccacc ccatcacgga aacccccaac accaacaat aaattagaca 1140
246 categeatta cataaattga cacaagaeee aceeeaaaag ageageaaag attagageea 1200
247 catectegge ccaacacaat acacteaace tgcatagtat ctatetecae eccaacetag 1260
248 aaacaaaat ctaatcagca ccaggcaccc aagtatcacg cacactcaaa aacataccca 1320
249 ccaattaaac acgccccacc cacccaacaa cccacccgcc tgacaacaca cttcgqaact 1380
250 acceteaaca teaceaaaag caategeaag ttaegatgae tecaaceace teactetete 1440
251 attg 1444
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254 <211> LENGTH: 7656
255 <212> TYPE: DNA
256 <213> ORGANISM: Rattus sp
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260 <222> LOCATION: (7471)..(7471)
261 <223> OTHER INFORMATION: "n" is an unknown nucleotide
263 <220> FEATURE:
264 <221> NAME/KEY: misc feature
265 <222> LOCATION: (7554)..(7554)
266 <223> OTHER INFORMATION: "n" is an unknown nucleotide
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269 <221> NAME/KEY: misc feature
270 <222> LOCATION: (7608)..(7608)
271 <223> OTHER INFORMATION: "n" is an unknown nucleotide
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275 gateceteca aaagagtgga acaetteaae tgecagatee aagataetga aatggqtage 120
276 atgctggaga aagaattcaa aagttaggta gagaatctgg ttgagcagag cacttqcttt 180
277 tettecagag gatetgagtt caagteecag gacetatate acagttttet gtaactetag 240
278 ctccagaggg tctgacactt ctgttcactg tgggcacctg cattcacaga caaacataaa 300
279 gtagttcatc accettttca cagaaaaccc acagcatgtg aggaaatccq qqtctctqcq 360
280 caatgccccc acagcagaag gggggagctg gagagatggt tcatctgtta gcccatttat 420
281 tgctcttgaa gagaacccag ggtcatccat agcacccata gcagctcaca accatctcca 480
282 gttccaggag atccaatgcc ctgttgtgac ctcaggtacc aggcatacac aatgaacctg 540
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RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 11/19/2004

PATENT APPLICATION: US/10/621,911A

TIME: 10:45:22

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Output Set: N:\CRF4\11192004\J621911A.raw

### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 7471,7554,7608

Seq#:8; N Pos. 2115,2142,2143,2146

VERIFICATION SUMMARY

DATE: 11/19/2004

PATENT APPLICATION: US/10/621,911A

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Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\11192004\J621911A.raw

L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:7440

M:341 Repeated in SeqNo=7

L:464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:2100